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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/688,064	10/13/2000	David B. Miller	10001197-1	1275
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22878 7590 11/05/2002

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EXAMINER

TRAN, MINH LOAN

ART UNIT

PAPER NUMBER

2826

DATE MAILED: 11/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/688,064

Applicant(s)

MILLER ET AL.

Examiner

Minhloan T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-13 and 21-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-13 and 21-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,5,7,8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. Applicant's communication filed on 08/08/2002 has been carefully considered by the examiner. The arguments advanced therein are persuasive with respect to the rejections of record and those rejections are accordingly withdrawn. In view of a further search, however, a new rejection is set forth further below. This action is not made final.

Information Disclosure Statement

2. The information disclosure statements filed 7/16/2002, 8/21/2002, 9/05/2002 have been considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gratrix (EP 649,041).

Gratrix discloses an optoelectronic device comprising an optical device system comprising an optical device substrate 20 supporting one or more optical devices 26; an optical lens system 12 comprising one or more optical lens 18 and a device bonding surface 14; a plurality of solder bumps 28 disposed between the optical device substrate 20 and the device bonding surface 14 of the optical lens system 12; wherein the plurality of solder bumps 28 bond the optical device substrate 20 to the device

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bonding surface 14 with the one or more optical devices 26 aligned with the one or more optical lens 18, and a characteristic dimension of the plurality of solder bumps 28 is selected based upon a representative focal distance between the one or more optical devices 26 and the one or more optical lens 18. Note figures 1, 2 and columns 3-5 of Gratrix.

Gratrix does not disclose the metallization patterns of the optical device system and the optical lens system. However, it would have been obvious to one of ordinary skill in the art to form the optoelectronic device of Gratrix having the metallization patterns of the optical device system and the optical lens system, because such structure is conventional in the art for bonding the solder bump to the optical device substrate or to the optical lens substrate.

Claims 3, 4-10, 12, 21-24, ^{13, 25-27}_λ are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi et al. (JP 11-354,769).

With regard to claim 3, Adachi et al. discloses an optoelectronic device comprising an optical device system having one or more optical devices 24 and a solderable metallization pattern having a spatial arrangement with respect to the one or more optical devices 24; an optical lens system 26 comprising one or more optical lens 27 and a device bonding surface 21 supporting a solderable metallization pattern 23 having a spatial arrangement with respect to the one or more optical lenses 27; wherein the one or more lenses 27 are recessed below the device bonding surface 21; a plurality of solder bumps 25 disposed between the metallization patterns of the optical

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device system and the optical lens system 26; wherein the plurality of solder bumps 25 bond the optical device 24 to the device bonding surface 21 with the one or more optical devices 24 aligned with the one or more optical lens 27. Note figures 1, 2, 5, 7 of Adachi et al.

Adachi et al. does not disclose an optical device substrate supporting the optical device. However, it would have been obvious to one of ordinary skill in the art to form the optoelectronic device of Adachi et al. having an optical device substrate because such structure is conventional in the art for forming a common substrate for a plurality of optical devices. Note figure 3 of Goel (6,037,641) or figures 2, 5-8 of Feldman et al. (5,923,796) are cited to support for the well known position.

With regard to claims 4-10, 12, 21-24, Adachi et al. discloses an optoelectronic device comprising an optical device system having one or more optical devices 24 and a solderable metallization pattern having a spatial arrangement with respect to the one or more optical devices 24; an optical lens system 26 comprising one or more optical lens 27 and a device bonding surface 21 supporting a solderable metallization pattern 23 having a spatial arrangement with respect to the one or more optical lenses 27; wherein the optical lens system 26 comprises an optical substrate 29 incorporating the one or more lenses 27 and the device bonding surface defines one face of a spacer substrate 21; a plurality of solder bumps 25 disposed between the metallization patterns of the optical device system and the optical lens system 26; wherein the plurality of solder bumps 25 bond the optical device 24 to the device bonding surface 21 with the

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one or more optical devices 24 aligned with the one or more optical lens 27. Note figures 1, 2, 5, 7 of Adachi et al.

Adachi et al. does not disclose an optical device substrate supporting the optical device. However, it would have been obvious to one of ordinary skill in the art to form the optoelectronic device of Adachi et al. having an optical device substrate because such structure is conventional in the art for forming a common substrate for a plurality of optical devices. Note figure 3 of Goel (6,037,641) or figures 2, 5-8 of Feldman et al. (5,923,796) are cited to support for the well known position.

With regard to claims 13, 25-27, Adachi et al. discloses an optoelectronic device comprising an optical lens system 26 comprising a lens substrate 29 supporting one or more optical lens 27 and a spacer substrate 21 defining one or more apertures 21a therethrough; an optical device system having one or more optical devices 24; wherein the lens substrate 29 is bonded to the spacer substrate 21 and the spacer substrate 21 is bonded to the optical device 24 with the one or more optical lenses 27, the one or more optical apertures 21a and the one or more optical devices 24 held together in registered alignment. Note figures 1, 2, 5, 7 of Adachi et al.

Adachi et al. does not disclose an optical device substrate supporting the optical device. However, it would have been obvious to one of ordinary skill in the art to form the optoelectronic device of Adachi et al. having an optical device substrate because such structure is conventional in the art for forming a common substrate for a plurality of optical devices. Note figure 3 of Goel (6,037,641) or figures 2, 5-8 of Feldman et al. (5,923,796) are cited to support for the well known position.

Conclusi n

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minhloan T. Tran whose telephone number is (703) 308-4919. The examiner can normally be reached on Monday-Friday 9:00 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (703) 308-6601. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Mlt
10/2002


Minhloan T. Tran
Primary Examiner
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